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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/596,467

06/14/2006

Thomas Netsch

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01/27/2010

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

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BRIARCLIFF MANOR, NY 10510

EXAMINER

LI, RUIPING

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

01/27/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/596,467	Applicant(s) NETSCH ET AL.	
	Examiner RUIPING LI	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4 and 6-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4 and 6-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is in response to the applicant response filed on 12/08/2009. In the applicant's response, claims 1, 4 and 6 were amended; claims 2-3, 5 and 10-11 were cancelled. Accordingly, claims 1, 4 and 6-9 are pending and being examined.

Specification

2. The specification of the invention is objected to because section headings are missing.

3. 35 USC § 103 is withdrawn in view of applicant's amendment.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moshfeghi (**USP, 5,633,951**), and in view of Front et al. (**USPGPub 2001/0041835 A1**, hereinafter "Front").

As to claim 1, Moshfeghi discloses a method for the computer-assisted visualization of a three-dimensional anatomical object **(the method for registering two volumetric images, see column 2 lines 46-49 and Fig.1)**, comprising the following method steps:

recording two or more diagnostic image data records of the object wherein at least one image data record comprises morphological image information of the anatomical object **(MRI and CT images, see column 4 lines 10-13, and Fig.1 elements 12 and 14);**

defining an imaging specification for imaging the image data onto a two-dimensional display plane **(imaging, see col. 4 lines 15-19, wherein the images are either obtained by obtaining 2D slices, without translating the table, and combined to form a 3D image or obtaining a 3D image wherein the table is translated respective to the imaging device. This is read as defining an imaging specification for imaging the data since the method has to be specified of which way to obtain the images.)**, the definition of the imaging specification involving the identification of anatomical features of the object in at least one of the image data records **(bones and tumors are read as the anatomical features, see column 4 lines 22-27)** and the determination of an object volume delimited by a curved surface **(contour extraction in voxels, see column 5 lines 32-34)** in which the anatomical features of the object are contained **(bones, tumors and soft tissues, see column 4 lines 22-27);**

calculating a combined two-dimensional representation by imaging the two or more image data records **(an image combining display processor, see column 4 lines 65-**

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67 and column 5 lines 1-4, and 18 of Fig.1) according to the previously defined imaging specification onto the common display plane (**image display in selected views, see column 5 lines 2-4 and 20 of Fig.1**) wherein a projection of the image information of the data records that is contained in the object volume is calculated during the calculation of the two-dimensional representation (**produce selected views in 2D image, see column 5 lines 2-4**).

Moshfeghi does not explicitly disclose wherein at least one further image data record comprises functional image information relating to the anatomical object. However, **Front** does teach wherein at least one further image data record comprises functional image information relating to the anatomical object (**the image data combined registered structural and functional images of the patient's body, see [0014] lines 1-5**). It would have been obvious to person skilled in the art at the time of the invention to combine the teaching of **Front** into the teaching of Moshfeghi in order to monitor the real time changes taking place due to a disease and guiding the instrument toward the target region (**Front, [0008] and [0009]**).

As to claim 4, the combination of Moshfeghi and **Front** discloses the method as claimed in claim 1, wherein in order to calculate the two-dimensional representation, Cartesian coordinates within the display plane are assigned to non-Cartesian surface coordinates of the object volume (**Moshfeghi, coordinates of the spline contour, see col.6 lines 64-66; also see polar coordinate system, col.8 lines 26-31 and $\bar{P}_1(i)$ in Fig.5a-5b**).

As to claim 6, the combination of Moshfeghi and Front discloses the method as claimed in claim 1, wherein the functional image information is obtained by evaluating temporal sequences of morphological image data of the anatomical object (**Front, functional images are temporal images in real time, see [0014] lines 1-5**).

As to claim 7, the combination of Moshfeghi and Front discloses the method as claimed in claim 1, wherein at least one of the image data records comprises at least one slice image of the anatomical object (**Moshfeghi, CT and MR images, see column 4 lines 15-20**).

As to claim 8, the combination of Moshfeghi and Front discloses the method as claimed in claim 1, wherein the image data records are recorded by means of computer tomography, magnetic resonance or ultrasound (**Moshfeghi, CT and MR images, see column 4 lines 9-15**).

As to claim 9, the combination of Moshfeghi and Front discloses the method as claimed in claim 1, wherein the image data records are recorded using different imaging modes (**Moshfeghi, a multi-modality imaging apparatus comprising a MR imager and a CT imager, see column 4 lines 9-11**).

Response to Arguments

5. Applicant's arguments, with respects to claim 1, filed on 12/08/2009, have been fully considered but they are not persuasive.

5-1. **Applicant** submits, on page 4 of the applicant's response, that there is no teaching or suggestion in the art of record that would support the combination of Moshfeghi and Front.

Examiner notes that, Front does explicitly teach combining a structural image and functional image in order to provide a method and system for guiding the instrument toward the target region (**Front, see [0008] and [0009]**).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RUIPING LI whose telephone number is (571)270-3376. The examiner can normally be reached on 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached on 571-272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Samir A. Ahmed/

Supervisory Patent Examiner, Art Unit 2624